NANO-UV™ DUAL SCANNER
Water & Surface Disinfection

User Manual

You are the proud owner of
the world's first compact
NANO-UV™ DUAL SCANNER
Water & Surface Disinfection

Zadro Health Solutions™

Read these instructions before use.

The *Nano-UV™ Dual Scanner* for water and surface disinfection safely kills 99.9% of targeted germs on surfaces within 10 seconds or in 500 mls (2 cups) of water within 40 seconds.

This product is designed for powerful surface and water disinfection. It produces sufficient energy to damage and alter DNA of all kinds of microorganisms.

For your safety, do not expose your body or your eyes to this Nano-UV™ light as it may be harmful

Do not let children play with or use the *Nano-UV™ Dual Scanner*

Use the *Nano-UV™ Dual Scanner* for disinfection of surfaces when at home, in public places, in the office or when traveling. The *Nano-UV™ Dual Scanner* can also be used for disinfecting drinking water when traveling in exotic or unfamiliar locations.

For surface disinfection:

For water disinfection:

Use Nano-UV™ Dual Scanner in:

Homes: kitchens, bathrooms, butcher blocks, remote controls, counters, bedding, mattresses, toilets, shower floors, footwear, litter boxes, pet beds

Nurseries: bottles, pacifiers, changing tables, cribs, toys

Offices: telephones, restrooms, cell phones, keyboards, furniture

Public places: hospitals, clinics, medical offices, waiting rooms, retirement homes, gyms

- Restaurants: utensils, tableware, high chairs, restrooms
- Public Restrooms: toilets, sinks, doorknobs, paper towel dispensers

Traveling:

- Hotels: pillows, bedding, towels, doorknobs, bathrooms, tables
- Airplanes: seats, headrests, waiting areas, trays, headsets

For Water Disinfection:

Use to disinfect water so that it is suitable for drinking and free of bacterial contaminants which can cause illness.

Nano-UV™ Dual Scanner:
Model No. NANO15

How to use:

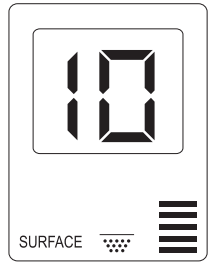
1. Do not use this product or allow anyone to use this product until proper operating procedures and warnings are understood.
2. Open the battery cover located on the top of the *Nano-UV™ Dual Scanner* by pressing down on tab and pulling outward simultaneously. Insert 4 AAA alkaline batteries (included).
3. Remove the protective cover located on the bottom of the Dual Scanner that protects the UV light.

NOTE: *Nano-UV™ Dual Scanner* will **NOT** turn on with protective cover in place.

4. Press and hold the Power button for 3 seconds then release to power the *Nano-UV™ Dual Scanner*.

NOTE: The Nano-UV™ light will not turn on until both gray buttons on the side are pressed simultaneously. This also functions as a child safety feature.

For Disinfecting Surfaces:



1. Press Select button and choose “Surface” on the LCD screen.
2. Allow the Nano-UV™ light to warm-up for at least 30 seconds (3 times 10 seconds) before using.
3. Hold the *Nano-UV™ Dual Scanner* between ¼ to 1½ inches from the surface you want to scan.
4. Simultaneously press the two gray buttons located on the sides and the Nano-UV™ light will come on for 10 seconds.

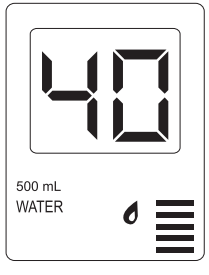
NOTE: The Nano-UV™ light will not turn on until

both gray buttons on the side are pressed simultaneously. This also functions as a child safety feature.

5. For highly contaminated areas, hold the light close to the object (¼") and repeat scan 2 to 3 times.
6. For larger areas, place the light between ¼" and 1½" and move the Dual Scanner slowly over the area until the entire surface has been scanned.
7. The closer the Dual Scanner is to the object, the more effective the disinfection.
8. The LCD screen will count down from 10 to 1 seconds and will display "OK" when finished.

For Disinfecting Water:

1. Make sure that the Nano-UV™ light wand is allowed to warm up for 30 seconds (3 times @10 seconds) in Surface Disinfection mode before changing to Water Disinfection mode.
2. Press "Select" button and choose "Water" on the LCD screen.
3. Holding the bottom black portion of the Nano-UV™ light, carefully flip the Nano-UV™ light wand out of the chamber until you hear a "click". Do not touch the Nano-UV™ light bulb.
4. Place the Nano-UV™ light wand in the water making sure the sensor pins located in the black potion of the wand are completely immersed in water.



NOTE: For safety reasons, Nano-UV™ light will turn off and the disinfection process will stop if the two metal pins are not immersed in water.

5. Press the two gray side buttons simultaneously and the Nano-UV™ light wand will count down from 40 seconds.

NOTE: The Nano-UV™ light will not turn on until both gray buttons on the side are pressed simultaneously. This also functions as a child safety feature.

6. During the water disinfection process, gently stir the water with the Nano-UV™ light wand until the countdown is complete. It takes 40 seconds to disinfect 500mls (2 cups) of clear water.

NOTE: The Dual Scanner is not water proof. Only immerse to the level of the two (2) sensor pins.

NOTE: Repeat the water disinfection process if larger water volumes greater than 500mls (2 cups) are used or additional disinfection is desired.

NOTE: The Nano-UV™ light will turn off automatically if the sensor pins are removed from the water. The disinfecting process and the countdown will continue when the sensor pins are immersed in the water again.

7. Press both gray side buttons again to restart

the water disinfection process for 40 seconds, or press the “Select” button to stop the process and shift to “Surface” disinfection mode.

8. The LCD screen on the top of the *Nano-UV™ Dual Scanner* will count down and display “OK” when the process has finished.

9. Carefully flip the Nano-UV™ light wand back into the original position in the chamber for storage when water disinfection is complete.

When disinfection is finished:

The *Nano-UV™ Dual Scanner* protective cover must be placed on the bottom of the *Nano-UV™ Dual Scanner* to protect the Nano-UV™ light and conserve batteries.

Auto off function:

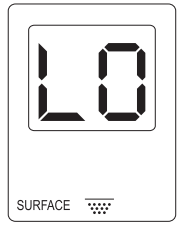
If the *Nano-UV™ Dual Scanner* is not used for more than 1 minute, the Dual Scanner will turn off automatically to save power.

Prolonged Storage:

After prolonged storage, press and hold the “Power” button until the LCD screen lights up and the Nano-UV™ light wand will turn on after normal start up sequence is completed.

Battery Indicator

When the battery voltage is low, the LCD screen will read ”LO”. Replace



the batteries. If the batteries are low, the Nano-UV™ Dual Scanner may not be effective in killing targeted germs on the surface in 10 seconds (99.9%) or in water in 40 seconds (99.9%).

Battery Replacement:

1. Remove battery cover located on the top of the *Nano-UV™ Dual Scanner* by pressing down on the tab and pulling outward simultaneously.
2. Remove the depleted batteries and replace them with new batteries in the polarity direction indicated inside the battery chamber.
3. Securely place battery cover cap back onto Dual Scanner.

Battery Caution:

- Use only fresh alkaline batteries of the required type and size.
- Do not mix old and new batteries, different types of batteries, or rechargeable batteries of different capacities.
- The batteries may explode if mistreated. Do not attempt to recharge or disassemble the batteries.
- Depleted batteries are to be removed from the Dual Scanner immediately.
- Dispose of the old batteries properly, and according to your local regulations.
- Ensure that batteries are kept out of reach of young children.

Comparison of Nano-UV™ Disinfection Light vs Standard UV Light

Type	Nano-UV™ Light	Standard UV Light
Light Wavelength	Multi-Wavelength UV-A & UV-C (185~365nm)	Single Wavelength UV-C (253.7nm)
Disinfection Power	99.9%	99.7%
Time of Disinfection	Surface: 10 seconds Water: 40 seconds	Surface:1 hour Water: Not Available
Speed of Disinfection	Rapid	Slow
Application & Design	Small, Handy & User Friendly Use in home and living environments	Bulky & Heavy Limited to commercial applications and environments

Certificates & Testing Laboratories

While carefully controlled microbiological testing of the *Nano-UV™ Dual Scanner* has been conducted, use of the *Nano-UV™ Dual Scanner* in the field may produce results that vary from our laboratory test data.

1. Intertek (ETL) Testing Laboratories – USA
2. SGS Ltd. Testing Laboratories - HK

Opportunities for infection are abundant and virtually everywhere. It is important to realize that use of the *Nano-UV™ Dual Scanner* does not guarantee that the user will avoid illness. To avoid microbial infection, one must take a wide range of precautions.

Specifications

UV Wavelength: Multi-wavelength including UV-A & UV-C
Dimensions: 3 ¾" x 1 ¾" x 1"
Weight: 95g (including batteries)
Power source: 4 - AAA Alkaline batteries
Power: 1.3W
Operation temperature (for surface): 68° - 122°F (20°- 50° C)
Operation temperature (for water): 59° - 122° F (15°- 50° C)
Storage temperature: 50° - 140° F (10° - 60° C)

Warranty

- 90 day limited warranty against defects in material and workmanship at the time of its original purchase by the consumer.

- Never disassemble or tamper with the *Nano-UV™ Dual Scanner* as it may cause injury or damage and the dual scanner warranty will be voided!

There are no consumer serviceable parts on the *Nano-UV™ Dual Scanner*. Any service attempts by unauthorized repair facilities could result in injury or damage to the Dual Scanner and will void all warranties. The *Nano-UV™ Dual Scanner* must be returned to Zadro Health Solutions, Inc. for repair.

Maintenance

When the LCD screen does not come on, simply replace the batteries. Nano-UV™ light bulb can be used for more than 6000 hours.

For the best disinfection performance, always keep the Nano-UV™ light bulb clean and avoid stains.

In case the Nano-UV™ light bulb gets dirty, wipe it with a soft cloth VERY GENTLY.

Caution

Improper operation of the *Nano-UV™ Dual Scanner* may cause injury. Read and understand all warnings prior to operating.

- **Do not use in any manner other than instructed in this User's Guide.**
- **Danger – Nano-Ultraviolet light can be harmful to skin and eyes.**
- **Do not use the Nano-UV™ light on any part of the body**
- **Do not look directly into the Nano-UV light. However, it is safe to view Nano-UV™ light through glass or plastic containers.**
- **Keep out of reach of children**
- **Do not touch the Nano-UV™ light bulb**
- **Mercury Hazard Do not allow any impact to the Nano-UV™ light bulb. If the light bulb is cracked, chipped or damaged, do not operate. In case the Nano-UV™ light bulb breaks, use a vacuum cleaner to clean it up. Do not touch the mercury directly with bare hands especially pregnant women.**
- **The Nano-UV™ light contains a small amount of mercury, which may cause redness or irritation to the skin if exposed. The mercury content meets RoHS requirements (less than 0.5mg)**
- **Remove the batteries when not in use for long periods of time**
- **Only use in clear water. Do not use in ice water**
- **Do not use as a light source**
- **Operating the Nano-UV™ Dual Scanner above 122ºF (50ºC) and below 68ºF (20ºC) for surfaces and below 59ºF (15ºC) for water is not recommended and the Nano-UV™ light may not be fully functional.**
- **To dispose of your Nano-UV™ light, contact your local dept. of environmental protection or other authority for disposal guidelines.**

Troubleshooting:

Why does the dual scanner not turn on?

1. Make sure the AAA alkaline batteries are new and do not need to be replaced.
2. Check the polarity of the batteries. Make sure the battery cover is properly inserted.
3. Remove the protective cover as it controls the main power switch.
4. Press and hold the “Power” button for 3 seconds.

Why does the Nano-UV™ light not turn on?
For Surface Disinfection Mode:
The Nano-UV™ light will only turn on if it is in the original position inside the chamber. It will turn off automatically if the Nano-UV™ light wand is flipped out.

For Water Disinfection Mode:
Check that the two sensor pins located on the black portion of the Nano-UV™ light wand are completely immersed in water.

Why does the Nano-UV™ light appear dim when immersed in water?

- Make sure that the Nano-UV™ light wand is allowed to warm up for 30 seconds (3 times @10 seconds) in Surface Disinfection mode before changing to Water Disinfection mode. Then immerse the Nano-UV™ light wand in the water.
- For cool water, repeat the disinfection process multiple times. This dual scanner is not intended for use in very cold water.

Can more than 500ml (2 cups) of water be disinfected in 40 seconds?
Water disinfection of more than 500mls (2 cups) requires additional exposure to the Nano-UV™ light. You should repeat the disinfection process multiple times when greater than 500mls (2 cups) of clear water is disinfected.

Why does the UV light still turn on when the tube is out of water?
Check the water remaining on the two Sensor Pins. Simply blow away any water drops between the two pins.

Zadro Health Solutions™

© 2011 Zadro Health Solutions, Inc.
Printed in China

Zadro Health Solutions, Inc.
Innovative Ideas That Make Life Easier™
Huntington Beach, CA 92649
(714) 892-9200 FAX (714) 892-7477
E-Mail Address: zadrohs@zadrohs.com
Website: www.zadrohs.com

Rev.08242011